

REMARKS

Claims 1-31 are pending in the application. All the pending claims stand rejected. By the foregoing amendment, the Applicants have amended claims 1-3, 11, 13, 16-17, 19-21, 23, 25 and 28. In view of the following discussion, Applicants submit that all pending claims are in condition for allowance.

In the Office Action on page 2, paragraph 1, the abstract of the disclosure was objected to as exceeding 150 words in length. Applicants have amended the abstract and submit herewith a new abstract under 37 C.F.R. § 1.72. Applicants submit the abstract is now in proper form.

In the Office Action on page 3, paragraph 9, the Examiner recommended editorial changes to the specification. The specification has been amended in accordance with the Examiner's suggestions. No new matter is added by the amendments herein. The amendments merely correct grammatical errors.

Claim Rejections

35 U.S.C. §112

In the Office Action on page 2, paragraph 2, claims 11 and 23-26 stand rejected under 35 U.S.C. §112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 11 is amended herein to depend from claim 2, claim 2 providing antecedent basis for the recitation of "said resistive layer". Applicants submit the rejection of claim 11 is overcome.

Claim 23 has been amended to correlate the recitation of "substrate" therein to the substrate of claim 1. Applicants submit the rejection of claim 23, and dependent claims 24-26 is overcome by the foregoing amendment.

Withdrawal of the rejections based on 35 U.S.C. §112, second paragraph is respectfully requested.

35 U.S.C. § 102

On page 2 of the Office Action, paragraph 4, claims 1-7, 23, 25, 26 and 29-31 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,666,907 to Manginell et al. ("the '907 patent"). It is noted the Action does not specifically state the reasons for the rejection, *i.e.*, the disclosure in the '907 patent that corresponds to each of the claim elements.

Applicants respectfully traverse this rejection.

Claim 1 as amended recites a microconcentrator comprising at least one microchannel formed on a substrate, at least one heating element in contact with at least one surface of the microchannel, and at least one absorbing layer disposed in said microchannel wherein analytes are sorbed on said absorbing layer and desorbed by application of heat from said heating element.

The '907 patent does not disclose or suggest a microconcentrator comprising at least one microchannel formed on a substrate, at least one heating element in contact with at least one surface of the microchannel, and at least one absorbing layer disposed in said microchannel wherein analytes are sorbed on said absorbing layer and desorbed by application of heat from said heating element. The '907 patent teaches away from the presently claimed invention at least in that the heater of the '907 patent is disposed opposite a microchannel and in any event not in contact with at least one surface of a microchannel (see, e.g., col. 3, lines 37-39; col. 4, lines 24-59). As a result, the '907 patent does not contain each and every limitation of independent claim 1 as amended. Therefore, it cannot anticipate claim 1. Claims 2-7, 23, 25, 26 and 29-31 depend from claim 1 and recite additional features therefore. Thus, these dependent claims are also not anticipated and are allowable. Accordingly, Applicants respectfully request this rejection be withdrawn.

On page 2 of the Office Action, paragraph 6, claims 1-27 and 29-31 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,527,835 to Manginell et al. ("the '835 patent"). It is noted the Action does not specifically state the reasons for the rejection, *i.e.*, the disclosure in the '835 patent that corresponds to each of the claim elements.

Applicants respectfully traverse this rejection.

Claim 1 as amended recites a microconcentrator comprising at least one microchannel

formed on a substrate, at least one heating element in contact with at least one surface of the microchannel, and at least one absorbing layer disposed in said microchannel wherein analytes are sorbed on said absorbing layer and desorbed by application of heat from said heating element.

Independent claim 12 as amended recites a microconcentrator comprising a microchannel, said microchannel further comprising a microheater, said microheater comprising a resistive layer contacting at least an interior surface of said microchannel, said microconcentrator further comprising a sealing layer formed over said microchannel and an absorbing layer formed between said resistive layer and said sealing layer.

Independent claim 16 as amended recites a method for fabricating a microconcentrator comprising the steps of: providing a substrate; patterning said substrate; forming a microchannel in said substrate; forming a resistive layer in contact with at least an interior surface of said microchannel; forming an absorbent layer in said microchannel; and forming a sealing layer over said microchannel.

The '835 patent teaches away from the presently claimed invention at least in that the heater of the '835 patent is not disposed in contact with at least one surface of a microchannel. The '835 patent specifically teaches forming a resistive heating element on a suspended membrane to avoid contact of the resistive heating element with any surface of a microchannel. As a result, the '835 patent does not contain each and every limitation of independent claim 1 as amended, which requires a heating element in contact with at least one surface of a microchannel. Therefore, it cannot anticipate claim 1. Claims 2-7, 23, 25, 26 and 29-31 depend from claim 1 and recite additional features therefore. Thus, these dependent claims are also not anticipated and are allowable.

Likewise, the '835 patent does not contain each and every limitation of independent claim 12 as amended, which requires a microheater comprising a resistive layer contacting at least an interior surface of said microchannel. Therefore, it cannot anticipate claim 12. Claims 13-15 depend from claim 12 and recite additional features therefore. Thus, these dependent claims are also not anticipated and are allowable.

Moreover, the '835 patent does not contain each and every limitation of independent claim 16 as amended, which requires the steps of forming a microchannel in said substrate and forming a

resistive layer in contact with at least an interior surface of said microchannel. Therefore, it cannot anticipate claim 16. Claims 17-22 depend from claim 16 and recite additional features therefore. Thus, these dependent claims are also not anticipated and are allowable.

Accordingly, Applicants respectfully request the foregoing rejections be withdrawn.

In the Office Action on page 3, paragraph 7, claim 28 was rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,726,822 to Cates et al. ("the '822 patent").

Applicants traverse this rejection.

Amended claim 28 recites a microconcentrator comprising a microchannel comprising an interior surface, a heating element in contact with at least the interior surface of the microchannel, a sealing layer formed over said heating element and an absorbing layer formed between said heating element and said sealing layer. The '822 patent neither discloses nor suggests the invention of amended claim 28 at least in that it does not disclose a microchannel. Therefore, it cannot anticipate claim 28. Accordingly, Applicants respectfully request this rejection be withdrawn.

Applicants submit that all claims pending in the patent application are in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issuance are earnestly solicited. A petition for a one-month extension of time is enclosed herewith. In the event there are any fees due and owing in connection with this matter, please charge same to our Deposit Account No. 11-0223.

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Respectfully submitted,

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